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L1: Entry 1 of 4

File: USPT

May 22, 2001

US-PAT-NO: 6235445

DOCUMENT-IDENTIFIER: US 6235445 B1

TITLE: Thermal transfer sheet

DATE-ISSUED: May 22, 2001

## INVENTOR-INFORMATION:

| NAME                | CITY     | STATE | ZIP CODE | COUNTRY |
|---------------------|----------|-------|----------|---------|
| Nakamura; Hideyuki  | Shizuoka |       |          | JPX     |
| Takahashi; Yonosuke | Shizuoka |       |          | JPX     |

US-CL-CURRENT: 430/200; 428/195, 428/473.5, 428/913, 428/914,  
430/945

## ABSTRACT:

The present invention provides a thermal transfer sheet comprising a substrate, and a light-to-heat conversion layer containing a substance capable of converting light to heat and a binder, and an image forming layer, which are disposed on the substrate, wherein the binder in the light-to-heat conversion layer is a polyimide resin soluble in an organic solvent. In the thermal transfer sheet provided by the present invention, the light-to-heat conversion layer is not affected by the coating liquid disposed as a layer on the light-to-heat conversion layer. Further, the light-to-heat conversion layer thus formed exhibits high heat resistance and humidity resistance. Accordingly, the thermal transfer sheet of the present invention produces good images with little or no fogging.

16 Claims, 0 Drawing figures Exemplary Claim Number: 1

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image |
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☐ 2. Document ID: US 5935902 A Relevance Rank: 52

L1: Entry 2 of 4

File: USPT

Aug 10, 1999

US-PAT-NO: 5935902

DOCUMENT-IDENTIFIER: US 5935902 A

TITLE: Image transfer sheet and image forming method

DATE-ISSUED: August 10, 1999

## -----INVENTOR-INFORMATION:-----

| NAME           | CITY     | STATE | ZIP CODE | COUNTRY |
|----------------|----------|-------|----------|---------|
| Imamura; Naoya | Shizuoka |       |          | JPX     |

US-CL-CURRENT: 503/227; 428/195, 428/474.4, 428/913, 428/914,  
430/200, 430/201, 430/945

## ABSTRACT:

An image transfer sheet consists of a support sheet, a light-heat conversion layer and an image formation layer; or a support sheet, a light-heat conversion layer, a heat-sensitive releasing layer and an image formation layer. The light-heat conversion layer is formed by coating a coating liquid containing a light-heat conversion material and polyamide acid to form a coated layer and drying the coated layer. A composite is composed the image transfer sheet and an image receiving sheet having a substrate and an image receiving layer thereon. An image forming method is conducted using the composite by means of laser light.

21 Claims, 5 Drawing figures Exemplary Claim Number: 17,18  
Number of Drawing Sheets: 2

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| Full | Title | Citation | Front | Review | Classification | Date | Reference |
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| RWC | Draw. Desc | Image |
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☐ 3. Document ID: US 5534383 A Relevance Rank: 50

L1: Entry 4 of 4

File: USPT

Jul 9, 1996

US-PAT-NO: 5534383

DOCUMENT-IDENTIFIER: US 5534383 A

TITLE: Image transfer sheet, its laminate and image forming method

DATE-ISSUED: July 9, 1996

## -----INVENTOR-INFORMATION:-----

| NAME                | CITY     | STATE | ZIP CODE | COUNTRY |
|---------------------|----------|-------|----------|---------|
| Takahashi; Yonosuke | Shizuoka |       |          | JPX     |
| Imamura; Naoya      | Shizuoka |       |          | JPX     |
| Nakamura; Hideyuki  | Shizuoka |       |          | JPX     |
| Kawabata; Kouya     | Shizuoka |       |          | JPX     |

US-CL-CURRENT: 430/201; 430/200, 430/257, 430/273.1, 430/961

## ABSTRACT:

An image forming method comprises the steps of applying a laser light imagewise and sequentially onto a laminate for image formation and separating the image receiving sheet from other materials of the laminate so as to keep on the image receiving sheet an imagewise transferred image formation layer comprising the thermoplastic resin and pigment. The laminate for image formation comprises, an image transfer sheet comprising, in order, a support sheet, a light-heat conversion layer containing a light-heat conversion material which absorbs a laser light and instantly produces a heat, a heat sensitive releasing layer containing a material which produces a gas upon receiving the heat produced in the light-heat conversion layer, and an image formation layer which comprises a thermoplastic resin and a pigment, and an image receiving sheet via a thermally fusible material in the form of a large number of dots or in the form of lines to divide an interface between the image formation layer and the image receiving sheet into different areas. The material of the heat sensitive releasing layer can be incorporated into the light-heat conversion layer.

10 Claims, 12 Drawing figures Exemplary Claim Number: 4  
Number of Drawing Sheets: 6

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| Full | Title | Citation | Front | Review | Classification | Date | Reference |
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| KWIC | Draw Desc | Image |
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☐ 4. Document ID: US 5619243 A      Relevance Rank: 50

L1: Entry 3 of 4

File: USPT

Apr 8, 1997

US-PAT-NO: 5619243

DOCUMENT-IDENTIFIER: US 5619243 A

TITLE: Image recording and erasing method

DATE-ISSUED: April 8, 1997

## INVENTOR-INFORMATION:

| NAME              | CITY     | STATE | ZIP CODE | COUNTRY |
|-------------------|----------|-------|----------|---------|
| Hotta; Yoshihiko  | Mishima  |       |          | JPX     |
| Suzuki; Akira     | Mishima  |       |          | JPX     |
| Obu; Makoto       | Yokohama |       |          | JPX     |
| Kitamura; Takashi | Ichikawa |       |          | JPX     |

US-CL-CURRENT: 347/139; 346/135.1, 347/262

## ABSTRACT:

An image recording and erasing method for recording images and erasing the same repeatedly by use of a reversible thermosensitive recording medium which is capable of reversibly changing the transparency and color tone thereof depending upon the temperature thereof, includes the steps (a) disposing a light-to-heat conversion sheet above the reversible thermosensitive recording medium; (b) applying a laser beam to the light-to-heat conversion sheet to heat the reversible thermosensitive recording medium by the heat generated by the light-to-heat conversion sheet upon the application of the laser beam thereto, thereby forming images on the reversible thermosensitive recording medium and/or erasing images therefrom; and (c) removing the light-to-heat conversion sheet away from the reversible thermosensitive recording medium.

22 Claims, 4 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 3

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| Full | Title | Citation | Front | Review | Classification | Date | Reference |
|------|-------|----------|-------|--------|----------------|------|-----------|

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| KWIC | Draw Desc | Image |
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